CLAIMS

What is claimed is:

1. A method for preparing nucleic acid microchips comprising:

attaching nucleic acid molecules to a first surface of a first chip, and

contacting said first surface of said first chip with a first surface of a second chip.

2. The method of claim 1, wherein the nucleic acid molecules are DNA.

3. The method of claim 1, wherein the nucleic acid molecules are RNA.

4. The method of claim 1, wherein the first surface of the second chip is in a relatively liquid state.

5. The method of claim 1, wherein the first surface of the second chip comprises a rubber material.

6. The method of claim 1, wherein the first surface of the second chip comprises an acrylamide layer.

7. The method of claim 1, wherein the first surface of the first chip comprises a nucleic acid surface density of at least 50 pmoles/ cm^2, more preferably ranging from 50-2000 pmoles/ cm^2, and most preferably greater than 2000 pmoles/ cm^2.

8. The method of claim 1, wherein the nucleic acid molecules are attached to the first surface of the first chip by disulphide bonds.

9. The method of claim 1, wherein the printing temperature is 25°C.

10. The method of claim 1, wherein the printing temperature ranges from 25°C -100°C.

11. The method of claim 1, wherein the printing temperature is 95°C, more preferably 99°C, and most preferably 100°C.

12. The method of claim 1, wherein the printing temperature is at least 30°C.

13. The method of claim 1, wherein the printing time varies from about 10 seconds to about 10 minutes.

14. The method of claim 1, wherein the printing time is at least 15 seconds.

15. The method of claim 1, wherein the number of print chips generated from a single master chip ranges from 2-200 print chips.

16. The method of claim 1, wherein the number of print chips generated from a single master chip is at least two.

17. The method of claim 1, wherein the nucleic acid is RNA or DNA.

18. A nucleic acid microchip prepared by a method comprising:

attaching nucleic acid molecules to a first surface of a first chip, and

contacting said first surface of said first chip with a first surface of a second chip.

19. The microchip of claim 18, wherein the nucleic acid molecules are DNA.

20. The microchip of claim 18, wherein the nucleic acid molecules are RNA.

21. The microchip of claim 18, wherein the first surface of the second chip is in a relatively liquid state.

22. The microchip of claim 18, wherein the first surface of the second chip comprises a rubber material.

23. The microchip of claim 18, wherein the first surface of the second chip comprises an acrylamide layer.

24. The microchip of claim 18, wherein the first surface of the first chip comprises a nucleic acid surface density of at least 50 pmoles/ cm^2, more preferably ranging from 50-2000 pmoles/

cm^2, and most preferably greater than 2000 pmoles/ cm^2.

25. The microchip of claim 18, wherein the nucleic acid molecules are attached to the first surface of the first chip by disulphide bonds.

26. The microchip of claim 18, wherein the printing temperature is 25°C.

27. The microchip of claim 18, wherein the printing temperature ranges from 25°C -100°C.

28. The microchip of claim 18, wherein the printing temperature is 95°C, more preferably 99°C, and most preferably 100°C.

29. The microchip of claim 18, wherein the printing temperature is at least 30°C.

30. The microchip of claim 18, wherein the printing time varies from about 10 seconds to about 10 minutes.

31. The microchip of claim 18, wherein the printing time is at least 15 seconds.

32. The microchip of claim 18, wherein the number of print chips generated from a single master chip ranges from 2-200 print chips.

33. The microchip of claim 18, wherein the number of print chips generated from a single master chip is at least two

34. The microchip of claim 18, wherein the nucleic acid is RNA or DNA.